

AMENDMENTS TO THE CLAIMS

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 1 and 16 to read as follows:

1. (Currently Amended) A sensor cleaning apparatus for an ink-jet printer having a sensor attached to a side of a carriage, comprising:
a sensor wiper wiping which wipes a surface of the sensor; and
a wiper driving portion driving which drives the sensor wiper,
wherein the sensor is positioned above the sensor wiper according to a movement of the carriage, ~~and the sensor wiper is oscillated by the wiper driving portion by a predetermined amplitude to clean the surface of the sensor, and the sensor wiper is formed separately from a nozzle wiper.~~
2. (Original) The sensor cleaning apparatus of claim 1, wherein the sensor wiper oscillates in a perpendicular direction with respect to an advancing direction of the carriage.
3. (Original) The sensor cleaning apparatus of claim 1, wherein the sensor wiper oscillates in a parallel direction with respect to an advancing direction of the carriage.
4. (Original) The sensor cleaning apparatus of claim 1, wherein the sensor wiper is formed of a rubber material.
5. (Original) The sensor cleaning apparatus of claim 1, wherein the sensor is moved above the sensor wiper when the ink-jet printer is switched to a maintenance state.
6. (Original) The sensor cleaning apparatus of claim 1, wherein the sensor is periodically moved above the sensor wiper during a printing process.
7. (Original) A sensor cleaning apparatus for an ink-jet printer having a sensor

attached to a side of a carriage having an ink cartridge with nozzles, comprising:

a movable plate having a nozzle wiper wiping the nozzles of the ink cartridge that is mounted on the carriage; and

a sensor wiper formed on the movable plate to be in contact with a surface of the sensor when the carriage is positioned above the nozzle wiper,

wherein while the movable plate is moved and the nozzle wiper wipes the nozzles of the ink cartridge, the sensor wiper wipes the surface of the sensor.

8. (Original) The sensor cleaning apparatus of claim 7, wherein the wiper is moved in a perpendicular direction with respect to an advancing direction of the carriage.

9. (Original) The sensor cleaning apparatus of claim 7, wherein the wiper is moved in a parallel direction with respect to an advancing direction of the carriage.

10. (Original) The sensor cleaning apparatus of claim 7, wherein the sensor wiper is formed of a rubber material.

11. (Original) The sensor cleaning apparatus of claim 7, wherein the sensor is moved above the sensor wiper when the ink-jet printer is switched to a maintenance state.

12. (Original) The sensor cleaning apparatus of claim 7, wherein the sensor is periodically moved to above the sensor wiper during a printing process.

13. (Original) An ink-jet printer having a sensor attached to a side of a carriage having an ink cartridge with nozzles, comprising:

a sensor cleaning apparatus comprising,

a movable plate having a nozzle wiper mounted thereon to wipe the nozzles of the ink cartridge that is mounted on the carriage, and

a sensor wiper formed on the movable plate to be in contact with a surface of the sensor when the carriage is positioned above the nozzle wiper,

wherein while the movable plate is moved and the nozzle wiper wipes the nozzles of the ink cartridge, the sensor wiper wipes the surface of the sensor.

14. (Original) The ink-jet printer of claim 13, wherein the sensor is moved above the sensor wiper when the ink-jet printer is switched to a maintenance state.

15. (Original) The sensor cleaning apparatus of claim 13, wherein the sensor is periodically moved above the sensor wiper during a printing process.

16. (Currently Amended) A method in a sensor cleaning apparatus for an ink-jet printer having a sensor attached to a side of a carriage, the method comprising:

wiping a surface of the sensor using a sensor wiper; and

driving the sensor wiper using a wiper driving portion,

wherein the sensor is positioned above the sensor wiper according to a movement of the carriage, and the sensor wiper is oscillated by the wiper driving portion by a predetermined amplitude to clean the surface of the sensor, and the sensor wiper is formed separately from a nozzle wiper.

17. (Original) A method in a sensor cleaning apparatus for an ink-jet printer having a sensor attached to a side of a carriage having an ink cartridge with nozzles, the method comprising:

wiping the nozzles of the ink cartridge that is mounted on the carriage, using a movable plate having a nozzle wiper; and

causing a sensor wiper formed on the movable plate to be in contact with a surface of the sensor when the carriage is positioned above the nozzle wiper,

wherein while the movable plate is moved and the nozzle wiper wipes the nozzles of the ink cartridge, the sensor wiper wipes the surface of the sensor.